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Introduction

- ▶ Reading, discussing and writing
- ▶ Confidence
- ▶ Reader goodwill
- ▶ Getting started

Reading maketh a full man; conference a ready man; and writing an exact man.
(Sir Francis Bacon, *Essays*, 1597)

Reading, discussing and writing

Communication as described by Sir Francis Bacon in the late sixteenth century is much the same as the communication of a practising engineer – man or woman – today. Reading, discussing and writing take up a large part of a working life, and through these activities knowledge is broadened, abilities are sharpened and reactions become more focused; the experience and expertise of the professional engineer are presented precisely and effectively.

This book is primarily concerned with the third aspect, writing, but the other two are equally important. Engineers must find out what is happening in their field, nationally and internationally; they must keep up to date with current practice and study the exact requirements of their companies and their clients. They must read the relevant documentation and be ready to respond to it if their knowledge is to be 'full', that is, sufficient to allow them to make appropriate decisions.

It would perhaps be brave, and certainly foolhardy, to take all such decisions in isolation. Bacon's second requirement, 'conference', involves engineers in meeting people, talking to their clients, giving instructions and making presentations, and discussing day-to-day problems with other engineers. Cooperation and mutual support result from such interaction, especially if 'conference' includes the underrated ability to listen well.

Writing, says Bacon, makes the writer 'exact'. In transforming ideas into written words, engineers have to make choices. They have to analyse exactly what is to be expressed, identify the readership, and decide on the appropriate format and style. In the education and training which made them engineers, they discovered the need for careful, precise and logical thought. In learning to be writers, they must apply the same criteria. Technical knowledge has to be communicated accurately, and as engineers write emails, plan business cases, prepare specifications or reports, they must again be careful, precise and logical. They must have constantly in mind the needs of their readers, adjusting the amount of detail in the light of such needs and presenting the material in a logical form which can be identified easily and used with confidence.

Confidence

Confidence is a key word in this book. Engineers often prefer to do the job rather than write about it. When faced with the blank computer screen, they have to start by making difficult decisions. Which words should they choose and in what order? What are the conventions they should follow? How can they hold the reader's attention? How can they write convincingly?

Care, precision and logic are necessary to thinking and writing.

Writing for Engineers provides guidance in the use of words, construction of sentences and organisation of paragraphs. It also looks at some of the most important types of format, both traditional such as the specification and widespread such as email, and discusses the conventions which should be followed. Most of all, this book aims to give engineering writers the confidence that they are conveying their information accurately and clearly. They are thus able not only to do the work, but also to write about it in a professional way.

Nevertheless, accuracy by itself is not enough to hold the attention of readers and convince them of the writer's point of view. Engineers have been known to go to extreme lengths in order to make an impact. One young professional, faced with the problem of presenting monthly reports which seemed to be regularly ignored, wrote one report in verse. His manager was, as you might expect, surprised. He called the young man into his office and held forth at length about this aberrant behaviour. When he paused to ask what the writer had to say for himself, he was even more surprised and, one hopes, abashed at the reply: 'This is the first time you've taken the trouble to discuss my report with me.'

Shock tactics apparently work but are not recommended. If reports are written concisely, if the information is easily assimilated and the format well chosen, they will probably be read. What is certain is that if they are long-winded and unstructured, they will be ignored for as long as possible and finally read unhappily, if at all.

Reader goodwill

Good writing generates reader goodwill.

The best advice for the prospective writer is, then, as follows.

- Identify your readers.
- Know what they already know and what they need to know.
- Find out how much technical knowledge they are likely to have and what their involvement with the project is.
- Have full and accurate information at your disposal.
- Formulate your objectives (what you want to get out of this piece of writing).
- Analyse your readers' likely objectives, as far as you can.
- Have confidence in yourself and your material.
- Write.

Identify your readers and their objectives, and your own objectives, before beginning to write.

Getting started

A last word: don't feel that you have to begin at the beginning. The first sentence or paragraph is almost always the most difficult. Choose a simple, straightforward factual section which you feel comfortable with, and write it first. Then move to the next easiest section, and, when you feel ready, move on. Your confidence will have received a boost, and by the time you reach the first section of your document (quite late in the writing process), you will have had considerable practice in the art of good writing. Sir Francis Bacon, writing more than 400 years ago, was absolutely correct: writing has made you 'exact', and your readers will be grateful.

Don't feel that you have to begin at the beginning.
Confidence grows with the practice of good writing.

Summary

- Care, precision and logic are necessary to thinking and writing.
- Good writing generates reader goodwill.
- Identify your readers and their objectives, and your own objectives, before beginning to write.
- Don't feel that you have to begin at the beginning.
- Confidence grows with the practice of good writing.

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